# SUSTAINABLE SB150: **BIRTHDAY WEEKEND**

CASE STUDY



CITY OF SOUTH BEND OFFICE OF SUSTAINABILITY

## BACKGROUND

### SB150 BIRTHDAY WEEKEND

South Bend's Sesquicentennial Celebration was a once-in-a-lifetime community event. The size, scope, and visibility made it a perfect opportunity to pilot sustainable event practices and educate visitors and residents. To guide these efforts, the South Bend Office of Sustainability developed a Zero Waste Event Planning Guide and worked with event organizers to design and implement SB150 Birthday Weekend events with less waste.

Event summary:

Memorial Day Weekend, May 22<sup>nd</sup> - May 24<sup>th</sup>, 2015 60,000 attendees (approx.) Dedication of the River Lights Installation Live music on 3 stages Nearly 50 food vendors Three fireworks shows

National performing artist Ben Folds, with the South Bend Symphony Orchestra

## **OBJECTIVES**

## REDUCE THE EVENT FOOTPRINT

The Office of Sustainability explored opportunities for hosting more sustainable public events. Pilot initiatives focused on two areas:

- Waste. Large scale events result in a large amount of trash from single-use items. The Office sought to limit distribution of single-use items and provided opportunities for some materials to be diverted to recycling centers or anaerobic digesters. The shown hierarchy guided waste management efforts.
- 2. *Greenhouse gas (GHG) emissions.* The Office encouraged use of alternative



Solid Waste Management Hierarchy (EPA)

transportation and biofuels, as well as waste diversion, directly reducing the amount of fossil fuels burned as a result of the event.

#### MEASURE PILOT PROGRAM IMPACTS

All sustainability initiatives for the SB150 Birthday Weekend were carried out as pilot programs. Wherever possible, quantitative and qualitative data was captured and analyzed. The Office evaluated program impacts and lessons learned.

### CAPTURE PUBLIC ATTENTION

The City of South Bend values the positive impacts of sustainability on the community's social, economic, and environmental health. Attendees were exposed to the availability of sustainable choices and educated about the impacts of their individual actions.

## PILOT PROGRAMS

#### WATER

**Program details:** To reduce waste and emissions from the disposal of plastic water bottles, the City partnered with a local company to provide two locations for event attendees to fill reusable water bottles free of charge. The company supplied filtered water, dispensers, and staff for the duration of the event. The water service was paid for with donations from local businesses. The booths required electricity to keep the water refrigerated. The staff also sanitized the water spouts and hand pumps regularly during the event. The Office of Sustainability created educational signs for the booth that described the importance of reusing water bottles (See Appendix B).

**Program outcome:** During the event, 1,600 gallons of water were dispensed.<sup>1</sup> This is equivalent to over 12,000 half-liter disposable water bottles. The program avoided an estimated 375 pounds of plastic waste.<sup>2</sup>

Lessons learned: The presence of staff at the booths helped ensure the function and sanitation of the filling stations. The staff also helped educate the public on the importance of reducing waste from disposable bottles. Open communication with the water supplier helped ensure that no disposable cups were made available. It also helped filling station staff better communicate the City's sustainability message to event attendees. In the future, the water filling station could sell affordable reusable bottles. The City could also discourage food vendors from selling bottled water.

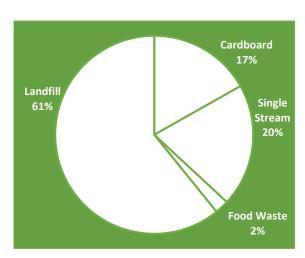
<sup>&</sup>lt;sup>1</sup> Canney's Water Supply.

<sup>&</sup>lt;sup>2</sup> The average weight of a disposable water bottle is 0.5 oz.

### RECYCLING

**Program details:** To provide recycling services, the City relied on donations from local companies and City departments. Cardboard boxes were donated to serve as trash barrels, and blue plastic bin liners were donated for collecting cans, bottles, and paper. Signs that illustrated what could be recycled were also donated for the event (See Appendix C). Recycling dumpsters were labeled for event staff. A cardboard dumpster was available for use. Some Resource Recovery Stations were staffed by Waste Watcher volunteers who helped event attendees sort their trash and recyclables into appropriate bins. A local recycling service center provided dumpsters and transported the recyclables at no cost.

Program outcome: The recycling program was a successful first attempt to include recycling services at a large City event. During the event, 3,960 pounds of single-stream recycling was collected and recycled.<sup>3</sup> Additionally, 3,320 pounds of cardboard were collected and recycled.<sup>4</sup> These figures account for 20% and 17% of all waste collected by the City during the event, respectively. (Note: Some trash, recycling, and food waste was captured and removed by the Century Center, not the City. This trash, recycling and food waste could not be accurately measured and is not included in calculations.)



Division of SB150 waste by disposal or recycling method.



SB150 Volunteers with recycling and trash bins. (Office of Sustainability)

Lessons learned: Several factors contributed to the success of this program. First, Waste Watcher volunteers spent many hours over the weekend helping attendees sort recyclable materials from trash. Large signs were also displayed with pictures to help users sort their trash correctly. However, several challenges limited the success of the program. Recycling bins were identical to trash bins, and while labeled, were likely not adequately distinguishable for many people. Additionally, there were not enough Waste Watcher volunteers to staff each Resource Recovery Station, which would have

improved separation. The collection of recyclables may also have been hampered by the ill-

<sup>&</sup>lt;sup>3</sup> Republic Services.

<sup>&</sup>lt;sup>4</sup> Republic Services.

fitting bags, which fell into the cardboard bins and needed adjustment frequently. In the future, a comprehensive waste management checklist and more visibly distinct containers will help organizers achieve greater diversion rates.

#### **FOOD WASTE**

**Program details:** To reduce GHG emissions from food waste in the landfill, the City provided yard waste totes that were labeled with an illustrative sign (See Appendix D). Because food waste accepted by the local digester had to be free from napkins and non-organic waste, bins were only available for use when a Waste Watcher Volunteer was present. Food waste bins were not made available to food vendors, because it was assumed they would bring pre-made food to the event. The City's Bureau of Solid Waste transported the collected food waste to the local digester.

**Program outcome:** One 95-gallon tote was filled with 280 pounds of food waste.<sup>5</sup> The bin contained a large amount of bones and corn cobs.

Lessons learned: While some food waste was collected, it is likely that a large amount went to the landfill. The collection bins were very dissimilar to the trash and recycling bins and may have been overlooked. They were also very similar to trash totes that most residents



Sustainability Coordinator Krista Bailey with food waste collection bins. (Office of Sustainability)

use at home, and therefore had to be tied shut when no volunteer was present to prevent contamination. Future events would benefit from recruiting more volunteers to staff the food waste bins, working with vendors to divert food waste at the end of the event, and placing signs lower on the bins.

### **BIODIESEL**

**Program details:** Initially, the Office sought locally produced 100% biodiesel for all generators. However, the equipment necessary to store fuel on site or refuel generators was not readily available. Therefore, the City supplied a 2%-6% biodiesel blend for all generators.

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<sup>&</sup>lt;sup>5</sup> Culver Duck.

Program outcome: In total, 350 gallons of biodiesel were consumed at the event.6

Lessons learned: For future events, it will be necessary to take steps early in the process to clearly communicate to the fuel supplier about delivery, storage, operational limitations (re: ability of generators to run biodiesel and any special needs associated with fuel grade), and the fueling process with the vendor and generator company prior to moving forward with conversations to procure the biodiesel. Working with Central Services to negotiate this is recommended, as they have the equipment, ability, and experience to effectively procure and dispense fuel. Local and regional markets may be limited in their abilities to provide this fuel and associated equipment and services.

## **FOOD VENDORS**

**Program details:** Vendor contracts for the event included information encouraging vendors to adopt the Sustainability Office's Zero Waste Event guidelines (See Appendix E). Vendors were offered technical assistance and bulk purchase opportunities. Suggestions for reducing waste included:

- Using compostable and/or recyclable dinnerware
- Ensuring decorations were recyclable
- Providing condiments in bulk instead of individual packets
- Offering finger foods to limit the need for utensils

**Program outcome:** Vendor participation was not monitored.

**Lessons learned:** Future events might benefit from stronger language in the vendor contract. Communication will be essential to help create buy-in from vendors and move future events towards Zero Waste. Monitoring compliance during both event setup and food service will help measure the success of this initiative.

### SB150 PHONE APPLICATION

**Program details:** To provide an alternative to paper maps, the SB150 Birthday Weekend planners created an SB150 Mobile App. This app included a calendar, a site map, detailed information on exhibits and events, and a description of what sustainability initiatives were taking place during the weekend.

**Program outcome:** The app was downloaded at least 1,000 times.<sup>7</sup>

**Lessons learned:** While the phone app was useful, its existence may not have been widely known. Additionally, newspaper handouts were available at every entrance gate and included

<sup>&</sup>lt;sup>6</sup> Central Services, City of South Bend.

<sup>&</sup>lt;sup>7</sup> Google Play. Does not include downloads to devices running iOS.

more information than was available with the app. It is likely that visitors wanted quick access to an event map, which was included in each newspaper handout. Future planners might consider posting large maps so attendees don't feel the need for a personal copy

### WASTE WATCHER VOLUNTEERS

**Program details:** Twenty one local residents volunteered for the "Waste Watcher" program, contributing their time, energy, and passion for recycling to the success of this pilot program. These volunteers worked three-hour shifts positioned at "resource recovery stations" throughout the celebration. Volunteers engaged the public, helping people understand the environmental necessity and economic value of food waste reduction and recycling. They taught attendees about the process of food waste digestion and the transformation of food waste into biogas, as well as recycling, and helped attendees see the triple bottom line value of the City's diversion program.

**Program outcome:** A total of 21 "Waste Watchers" volunteered 63 hours of time, a value of \$1,384.20.8

**Lessons learned:** For the SB150 Birthday Weekend, Waste Watcher volunteers were trained for both SB150 and Waste Watcher duties. However, most SB150 volunteers were not trained for Waste Watcher duties. Going forward, basic waste management training should be given to all volunteers. This will help ensure that recyclables, trash and food waste end up in the correct dumpsters.

### PRE-EVENT MARKETING

**Program details:** Prior to the event, the Office of Sustainability described many of these pilot programs as part of South Bend's "*New GREENER normal.*" This message and plans for some of these pilot programs were communicated through several channels. In addition to an

appearance by Sustainability Office staff on WNIT's "Experience Michiana," the Office used the following media:

- Facebook, Twitter and other social media
- SB150 insert in the South Bend Tribune
- Century Center marquee
- Press release (See Appendix F)
- SB150 website and mobile app



Sustainability Coordinator Krista Bailey on "Experience Michiana" (WNIT)

<sup>&</sup>lt;sup>8</sup> At \$23.07/hour, from Independent Sector. https://www.independentsector.org/volunteer\_time.

**Program outcome:** 50,000 inserts were distributed during the weekend in addition to the 62,000 sent to South Bend Tribune subscribers. A five minute television segment aired on Experience Michiana on May 22, 2015. Several other new outlets also interviewed Office staff.

**Lessons learned:** No formal surveys were conducted during or after the Birthday Weekend to measure the reach of the Sustainability's Office messaging. However, informal comments suggested the Office reached and impacted a number of community members.

### **REUSABLE SIGNS**

**Program details:** Signs for dumpsters and refuse collection bins were designed to be able to be used again for future events. Other organizers were also encouraged to create reusable signs for the event.

**Program outcome:** Several reusable signs that labeled dumpsters were carried off when the dumpsters were picked up. Most refuse bin signs were collected and cleaned for future use.

**Lessons learned:** Because the efforts at the SB150 Birthday Weekend were part of a pilot program, the signs created for recycling, landfill and food waste may not be appropriate for all future events. It will be important to consider future use in the creation of any new signage.

## EVENT TRANSPORTATION (NOT AN OFFICE OF SUSTAINAILITY PROGRAM)

**Program details:** Compressed natural gas (CNG) Transpo busses operated Saturday and Sunday, shuttling attendees from remote parking lots to the event. All Transpo buses were free on Saturday to encourage ridership to the event. Bicycle racks were placed at all entry gates.

**Program outcome:** CNG shuttles travelled a total of 623 miles with a total of 3,965 passengers.<sup>10</sup> The number of cyclists was not captured.

**Lessons learned:** To better understand the rates of use of alternative transportation, it would be advantageous to count or estimate the number of cyclists at future events.

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<sup>&</sup>lt;sup>9</sup> Experience Michiana, May 22, 2015. http://video.wnit.org/video/2365495758/.

<sup>&</sup>lt;sup>10</sup> SBTranspo.

## SPECIAL THANK YOU TO THE CHAMBER OF COMMERCE LEADERSHIP TEAM AND OUR GENEROUS SPONSORS

**Kym Alsop** 

Kelli Foley

**Angelica Healy** 

John Kurdelak

**Aaron Sheets** 

**Duane Wilson** 















## **Jamil Packaging Company**

## APPENDIX A: DATA SUMMARY

Description	Outcome	Benefits <sup>11</sup>	Costs
Water refill stations	1,600 gallons dispensed	375 pounds of plastic <sup>12</sup> saved from landfill	\$8,600 (donated)
Food waste diversion	300 (approximate) pounds of food waste sent to a digester	56 pounds CO₂e emissions & \$5.23 tipping fee avoided	
Single stream recycling	3,960 pounds of materials recycled	1425 pounds CO₂e emissions & \$73.95 tipping fee avoided	
Cardboard recycling	3,320 pounds of cardboard recycled	1647 pounds CO <sub>2</sub> e emissions & \$62.00 tipping fee avoided, \$107.90 <sup>13</sup> scrap value	
Trash collection	12,000 pounds of materials sent to landfill		\$224.10 <sup>14</sup> tipping fees paid, 6350 pounds CO <sub>2</sub> E emitted
Biodiesel	350 gallons of biodiesel used in generators	304 pounds CO <sub>2</sub> emissions avoided <sup>15</sup>	

<sup>&</sup>lt;sup>11</sup> CO<sub>2</sub>E estimates from EPA WARM model. http://epa.gov/epawaste/conserve/tools/warm/index.html.

<sup>&</sup>lt;sup>12</sup> Estimated at 0.5 ounces per empty disposable water bottle.

<sup>&</sup>lt;sup>13</sup> Cardboard valued at \$65.00 per ton as of May 31st, 2015.

<sup>&</sup>lt;sup>14</sup> Landfill charged at \$37.35 per ton.

<sup>&</sup>lt;sup>15</sup> Diesel GHG estimated at 22.38lbs carbon dioxide per gallon. http://www.eia.gov/tools/faqs/

## TAP OR BOTTLE?

THE PRICE OF ONE MONTH OF DRINKING WATER



TAP WATER



AT AROUND A PENNY PER GALLON FROM THE TAP, THE COST OF DRINKING THE DOCTOR-RECOMMENDED 8 GLASSES OF WATER DAILY FOR ONE MONTH IS JUST 15¢. THE SAME AMOUNT OF BOTTLED WATER CAN COST UP TO \$116 PER MONTH.

SOURCE-AMERICAN WATER

S116.00 PERMONTH

SOUTH BEND

## (BOTTLED WATER VS. TAP WATER)

## DID YOU KNOW?

ON AVERAGE, BOTTLED WATER CONSUMES AROUND

2,000

TIMES MORE ENERGY THAN TAP WATER.

30,000,000



BOTTLES PER DAY END UP IN LANDFILLS OR THE OCEAN. ONLY 5% OF PLASTIC WATER BOTTLES ARE RECYCLED INTHE U.S.



TAP WATER IS TESTED MORE OFTEN AND HELD TO HIGHER SAFETY STANDARDS THAN BOTTLED WATER IN THE U.S.

QUARTOF
BOTTLED
WATER
REQUIRES
QUARTS OF
WATER TO

PRODUCE.

BOTTLED WATER COSTS

10.000

TIMES MORE THAN TAP WATER IN THEU.S., MORE BY VOLUME THAN POP OR GASOLINE.

## SOUTH BEND

OFFICE OF SUSTAINABILITY



# RECYCLE RECICLE



## **PLASTIC/PLASTICO**



## **ALUMINUM /ALUMINIO**



## **PAPER/ PAPEL**



SIGNAGE DONATED BY CROWE HORWATH LLP.

RECYCLING REMOVAL AND MATERIALS DONATED BY REPUBLIC SERVICE, INC. AND BORDEN WASTE-AWAY SERVICE, INC.











## APPENDIX D: FOOD WASTE SIGN



## APPENDIX E: EXCERPT FROM VENDOR CONTRACT

#### **Zero Waste Event**

We are proud to announce that this event will aim to be a Zero Waste event. The goal at a Zero Waste event is to plan ahead and distribute only materials that are recyclable or compostable (not any materials that will be landfilled).

Resource Recovery Stations will be in place at the event for recycling, composting, and landfill waste collection at several locations. Zero Waste events are a great way to not only show our commitment to the environment, but to create a living model of Zero Waste for event participants and the community.

As a food vendor handing out products at this event, you are the key to the success of our Zero Waste goal. Participating food vendors are urged to hand out only recyclable or compostable materials to the public.

Upon acceptance into the SB150 Taste of South Bend, we will be providing a list of resources for recyclable/compostable service wares which can be ordered in bulk for your use at the event. Our Zero Waste goal is simple to attain if you plan ahead of time for the types of materials you will be providing to the public at the event.

Vendors are required to minimize waste associated with the event. Here are some ideas to help you achieve this goal:

- Whenever possible, offer finger foods so as to use fewer utensils (e.g. sandwiches, pizza, wraps, fries, kabobs, sushi, eggs rolls)." Finger food items generate a minimal amount of waste for either trash or recycling.
- Consider replacing plastic bowls (for serving chili and soups) with bread bowls and using cones for ice cream. Paper napkins are compostable and can replace bulkier plates.
- Consider providing drinks (e.g. water, soda, coffee, tea) and condiments (e.g. sugar, ketchup, mustard, salad dressings, etc.) in bulk. Alternatively, for beverages, offer them in recyclable bottles and cans.
- If you must use plates, cups, bowls, cutlery, etc., *do not* use Styrofoam or non-recyclable plastics. Please consider using recyclable or compostable alternatives.
- Avoid using plastic bags or polystyrene for transporting food items. Please ensure decorations are recyclable.

Compostable materials can be purchased easily and locally through a partnership with Century Center service ware provider. There is no need to bring any trash or recycling cans of your own. A Resource Recovery Station will be provided for the disposal of recyclables, compost, and trash in your area.

We look forward to working with you to make this a successful Zero Waste event.

If you have questions regarding Zero Waste, please call the South Bend Office of Sustainability at 574-235-5910 or sustainability@southbendin.gov.

## APPENDIX F: PRE-EVENT PRESS RELEASE

FOR RELEASE: Monday, May 18, 2015

### CITY WORKS TO MAKE SB150 A SUSTAINABLE EVENT

The City of South Bend's Sustainability Office will pilot various strategies during the SB150 birthday weekend with the goal of creating minimal waste. Sustainability plans include:

### **Recycling and Food Waste Collection**

- Recycling and food waste containers will be placed throughout the campus and "waste watcher" volunteers will help the public sort items.
- Food waste collected at the event will be turned into energy at Culver Duck's digester facility.
- Recycling will be provided by Waste-Away Group, Republic Services, Jamil Packaging,
   Welch Packaging, and the City of South Bend Bureau of Solid Waste.
- Many Taste of South Bend vendors will support Zero Waste efforts by serving food in recyclable or compostable containers.

#### **Bio-Diesel Generators**

- Generators in the Taste of South Bend area will produce electricity using 100 percent biodiesel produced in Indiana. It is biodegradable, produces less air pollutants and greenhouse gases than petroleum-based diesel.
- Generators and biofuels are possible with support from Herrman & Goetz, Renewable Energy Group, and South Shore Clean Cities.

#### **Water Bottle Refill Stations**

• Canney's Water Solutions, with support from EmNet and Fleet Feet Sports, are providing water bottle filling stations at the Taste of South Bend and in Howard Park to reduce waste from bottled water. Bring an empty bottle and refill for free on Saturday and Sunday.

## **Reducing Paper Waste**

• The SB150 app provides event information from a smartphones or tablet.



3,320 lbs of CO<sub>2</sub>e emissions avoided

Eliminated waste from 12,000 disposable water bottles



350 gallons of biodiesel used in generators

3,320 lbs of cardboard recycled